CLAIMS

WHAT IS CLAIMED IS:

1. A method for operating a computer to display historical information about hyperlinks shown on web pages, the method comprising the following operations performed by the computer:

responsive to receiving user instructions to download a web page, commencing downloading of the web page;

identifying any hyperlinks present in the web page;

for each identified hyperlink, analyzing the hyperlink by performing steps comprising:

determining whether one or more users in a predefined access group have previously selected the identified hyperlink to download underlying data represented by the hyperlink;

only if one or more users in the predefined access group have previously selected the hyperlink, consulting a database to identify characteristics of the underlying data obtained from previous selections of the hyperlink by users in the access group;

referencing the identified characteristics against a presentation table to derive enhanced presentation attributes appropriate to the hyperlink; and

displaying the downloaded web page, including presenting each hyperlink with its derived enhanced presentation attributes.

1   2.   The method of claim 1, the predefined access group having a single member.

1   3.   The method of claim 1, the predefined access group having multiple members,
2   where the database is accessible to all members.

1   4.   The method of claim 1, the operations further including:
2   prior to analyzing the hyperlink, selecting the database from multiple available
3   databases.

5.   The method of claim 1, the operations of presenting each hyperlink with its derived
enhanced presentation attributes including at least one of the following:
displaying text, displaying graphics, generating sound, providing tactile output.

6.   The method of claim 1, where the displaying operation comprises:
2   initially displaying the web page such that hyperlinks are free from enhanced
3   presentation attributes;
4   the computer awaiting predetermined user input including direction of a cursor
5   proximate any of the displayed hyperlinks; and
6   responsive to the predetermined user input occurring for a hyperlink, presenting the
7   hyperlink with its derived enhanced presentation attributes.

1   7.   The method of claim 6, the predetermined user input additionally including

2   depressing of one or more buttons on a computer mouse while the cursor is proximate the

3   hyperlink.

1   8.   The method of claim 1, the operations further comprising, responsive to the user

2   selecting a hyperlink to download underlying data represented by the hyperlink:

3   the computer soliciting user specification of one of more of the following in

4   association with the underlying data:

5   user rating of the underlying data;

6   one or more representative multimedia symbols of one or more of the

7   following types: graphics images, sounds, videos, animations, tactile

8   sensations;

9   the computer recording the user specification in the database in association with

10   the hyperlink.

1   9.   The method of claim 6, further comprising:

2   sensing when the predetermined user input is absent, and then presenting the

3   hyperlink free from its enhanced presentation attributes.

1   10.   The method of claim 1, the operations further comprising:

2   responsive to the user selecting a hyperlink to download underlying data

3   represented by the hyperlink, the computer downloading the underlying data

4   represented by the hyperlink, and recording predetermined characteristics

5   of the underlying data in the database.

1 11. The method of claim 1, where the characteristics of the underlying data obtained

2 from previous selections include one or more of the following:

3   size of the underlying data;

4   dates of one or more previous selections of the hyperlink;

5   times of one or more previous selections of the hyperlink;

6   a length of time to download the underlying data;

7   one or more multimedia representative symbols, including one or more of the

8   following: graphics, sound, animation, video;

9   number of previous selections of the hyperlink;

10   user ratings of the underlying data;

11   whether the underlying data constitutes a web site that is under construction;

12   whether the hyperlink represents an expired link;

13   whether the user has bookmarked the underlying data;

14   any errors occurring during previous selections of the hyperlink.

1 12. The method of claim 1, the enhanced presentation attributes including one or more

2 of the following: changes in text font, changes in text color, changes in text underlining,

3 addition of specialty characters, addition of images.

1 13. The method of claim 1, further comprising:

2   determining whether the computer has received predetermined user input including

3   direction of a cursor proximate a hyperlink;

4   where performance of the analyzing operation for each hyperlink is conditioned

5   upon receipt of the predetermined user input for that hyperlink.

1   14.   A signal-bearing medium tangibly embodying a program of machine-readable

2   instructions executable by a digital processing apparatus to perform a method for

3   operating a computer to display historical information about hyperlinks shown on web

4   pages, the method comprising the following operations performed by the computer:

5   responsive to receiving user instructions to download a web page, commencing

6   downloading of the web page;

7   identifying any hyperlinks present in the web page;

8   for each identified hyperlink, analyzing the hyperlink by performing steps

9   comprising:

10   determining whether one or more users in a predefined access group have

11   previously selected the identified hyperlink to download underlying

12   data represented by the hyperlink;

13   only if one or more users in the predefined access group have previously

14   selected the hyperlink, consulting a database to identify

15   characteristics of the underlying data obtained from previous

16   selections of the hyperlink by users in the access group;

17   referencing the identified characteristics against a presentation table to

18   derive enhanced presentation attributes appropriate to the hyperlink;

19   and

20   displaying the downloaded web page, including presenting each hyperlink with its

21   derived enhanced presentation attributes.

1   15.   The medium of claim 14, the predefined access group having a single member.

1   16.   The medium of claim 14, the predefined access group having multiple members,

2   where the database is accessible to all members.

1   17.   The medium of claim 14, the operations further including:

2   prior to analyzing the hyperlink, selecting the database from multiple available

3   databases.

1   18.   The medium of claim 14, the operations of presenting each hyperlink with its derived

2   enhanced presentation attributes including at least one of the following:

3   displaying text, displaying graphics, generating sound, providing tactile output.

1   19.   The medium of claim 14, where the displaying operation comprises:

2   initially displaying the web page such that hyperlinks are free from enhanced

3   presentation attributes;

4   the computer awaiting predetermined user input including direction of a cursor

5   proximate any of the displayed hyperlinks; and

6   responsive to the predetermined user input occurring for a hyperlink, presenting the

7   hyperlink with its derived enhanced presentation attributes.

1   20.   The medium of claim 19, the predetermined user input additionally including

2 depressing of one or more buttons on a computer mouse while the cursor is proximate the

3 hyperlink.

1   21.   The medium of claim 14, the operations further comprising, responsive to the user

2 selecting a hyperlink to download underlying data represented by the hyperlink:

3   the computer soliciting user specification of one of more of the following in

4   association with the underlying data:

5   user rating of the underlying data;

6   one or more representative multimedia symbols of one or more of the

7   following types: graphics images, sounds, videos, animations, tactile

8   sensations;

9   the computer recording the user specification in the database in association with

10   the hyperlink.

1   22.   The medium of claim 19, further comprising:

2   sensing when the predetermined user input is absent, and then presenting the

3   hyperlink free from its enhanced presentation attributes.

23. The medium of claim 14, the operations further comprising:

responsive to the user selecting a hyperlink to download underlying data

represented by the hyperlink, the computer downloading the underlying data

represented by the hyperlink, and recording predetermined characteristics

of the underlying data in the database.

24. The medium of claim 14, where the characteristics of the underlying data obtained

from previous selections include one or more of the following:

size of the underlying data;

dates of one or more previous selections of the hyperlink;

times of one or more previous selections of the hyperlink;

a length of time to download the underlying data;

one or more multimedia representative symbols, including one or more of the

following: graphics, sound, animation, video;

number of previous selections of the hyperlink;

user ratings of the underlying data;

whether the underlying data constitutes a web site that is under construction;

whether the hyperlink represents an expired link;

whether the user has bookmarked the underlying data;

any errors occurring during previous selections of the hyperlink.

1   25.   The medium of claim 14, the enhanced presentation attributes including one or

2   more of the following: changes in text font, changes in text color, changes in text

3   underlining, addition of specialty characters, images.

1   26.   The medium of claim 14, further comprising:

2   determining whether the computer has received predetermined user input including

3   direction of a cursor proximate a hyperlink;

4   where performance of the analyzing operation for each hyperlink is conditioned

5   upon receipt of the predetermined user input for that hyperlink.

27.   An information system, comprising:

         a storage including a database; and

         an computer, coupled to the storage and configured to display historical information

              about hyperlinks shown on web pages by performing operations comprising:

              responsive to receiving user instructions to download a web page,

                   commencing downloading of the web page;

              identifying any hyperlinks present in the web page;

              for each identified hyperlink, analyzing the hyperlink by performing steps

                   comprising:

                   determining whether one or more users in a predefined access group

                        have previously selected the identified hyperlink to download

                        underlying data represented by the hyperlink;

13 only if one or more users in the predefined access group have

14 previously selected the hyperlink, consulting a database to

15 identify characteristics of the underlying data obtained from

16 previous selections of the hyperlink by users in the access

17 group;

18 referencing the identified characteristics against a presentation table

19 to derive enhanced presentation attributes appropriate to the

20 hyperlink; and

21 displaying the downloaded web page, including presenting each hyperlink

22 with its derived enhanced presentation attributes.